Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (currently amended) A dishwasher comprising:

a wash chamber ~~having~~ defined by a plurality of walls, each having an interior surface forming a sidewall of the wash chamber and an exterior surface, and a floor;

a pump for circulating wash liquid in said wash chamber;

a rotatable spray arm for receiving wash liquid from said pump and spraying said wash liquid in said wash chamber;

a filter ~~provided external to the wash~~ chamber provided on an exterior surface of a wash chamber sidewall for filtering wash liquid being circulated in said wash chamber comprising:

~~a filter chamber defined by~~ a chamber wall and ~~an~~ the exterior surface of one of said walls;

an inlet opening in said one of said walls communicating with said filter chamber, wherein said one of said walls has a non-linear portion for allowing wash liquid being circulated in said wash chamber to enter said filter chamber;

an outlet opening in said one of said walls communicating with said filter chamber for allowing wash liquid in said filter chamber to return to said wash chamber;

a filter element provided ~~in a~~ substantially ~~vertical orientation~~in the plane of said one of said walls at said outlet opening for filtering particulate material from said wash liquid as said wash liquid passes through said filter into said wash chamber; and

a drain outlet at the bottom of said filter chamber for draining wash liquid and material filtered by said filter to drain,

wherein the filtering chamber collects particulate material from said wash liquid.

2 (original) The dishwasher of claim 1 wherein said inlet opening is formed by a first wall portion above said inlet opening curving into said filter chamber and a second wall portion below said inlet opening generally in the plane of said one of said walls, and said outlet opening is formed in said second wall portion.

3 (original) The dishwasher of claim 2 wherein said first and second wall portions are formed in said one of said walls.

4 (original) The dishwasher of claim 2 wherein at least said one of said walls has wash liquid gathering surfaces formed on said at least one of said walls for directing wash liquid flowing down said at least one of said walls into said inlet opening.

5 (withdrawn) The dishwasher of claim 2 wherein said filter includes a baffle in said filter chamber depending downwardly from said second wall portion spaced from and overlying said outlet opening and said filter.

6 (original) The dishwasher of claim 1 wherein said filter comprises a permeable element overlying said outlet opening.

7 (original) The dishwasher of claim 6 wherein said permeable element is selected from the group of durable woven or non-woven mesh material, porous sheet material, filter media and photo etched sheet material.

8 (original) The dishwasher of claim 1 wherein said outlet opening is positioned adjacent said floor.

9 (original) The dishwasher of claim 8 wherein said spray arm has at least one nozzle positioned to spray wash liquid on said outlet opening as said spray arm rotates in said wash chamber to backwash said filter.

10 (original) The dishwasher of claim 1 wherein said one of said walls is the rear wall of said wash chamber.

11 (original) The dishwasher of claim 1 further comprising a wash chamber drain located in said floor for collecting wash liquid, and at least one pump for draining wash liquid from said wash chamber drain and for draining wash liquid and material filtered by said filter from said filter chamber.

12 (currently amended) A dishwasher comprising:

a wash chamber having a plurality of walls and a floor;

a pump for circulating wash liquid in said wash chamber;

a rotatable spray arm for receiving wash liquid from said pump and spraying said wash liquid in said wash chamber;

a wash chamber drain located in said floor for collecting wash liquid, and at least one pump for draining wash liquid from said wash chamber drain and for draining wash liquid and material filtered by said filter from said filter chamber;

a filter provided external to the wash chamber for filtering wash liquid being circulated in said wash chamber comprising:

a filter chamber defined by a chamber wall and an exterior surface of one of said walls;

an inlet opening in said one of said walls communicating with said filter chamber, wherein said one of said walls has a non-linear portion for allowing wash liquid being circulated in said wash chamber to enter said filter chamber;

an outlet opening in said one of said walls communicating with said filter chamber for allowing wash liquid in said filter chamber to return to said wash chamber;

a filter element provided in a substantially vertical orientation at said outlet opening for filtering particulate material from said wash liquid as said wash liquid passes through said filter into said wash chamber;

a drain outlet at the bottom of said filter chamber for draining wash liquid and material filtered by said filter to drain;

wherein the filtering chamber collects particulate material from said wash liquid~~The dishwasher of claim 11~~; and the dishwasher further ~~comprising~~having:

a control, and a selector valve having:

a first inlet connected to said filter drain outlet;

a second inlet connected to said wash chamber drain;

an outlet connected to said pump for draining wash liquid;

one or more valve elements movably mounted in said selector valve for selectively closing said first inlet or said second inlet;

one or more valve actuators for causing said one or more valve elements to selectively close said first inlet or said second inlet; and

wherein said control operates said one or more valve actuators to close said first inlet or said second inlet when said at least one pump for draining wash liquid is operating.

13 (previously presented) The dishwasher of claim 11 wherein said at least one pump for draining wash liquid comprises a first drain pump connected to said wash chamber drain, and a second drain pump connected to said filter chamber outlet; and said dishwasher includes a control for selectively operating said first drain pump for draining said wash chamber and for selectively operating said second drain pump for draining said filter chamber.

14 (original) The dishwasher of claim 11 wherein said at least one drain pump for draining wash liquid is driven by a reversible motor and said at least one drain pump drains wash liquid from said filter chamber when said motor rotates said at least one drain pump in a first direction, and said at least one drain pump drains wash liquid from said wash chamber when said motor rotates said at least one drain pump in a second direction, and said filter chamber is connected to said at least one drain pump through a valve for closing the connection of said filter chamber to said at least one drain pump.

15 (original) The dishwasher of claim 14 wherein said pump for circulating wash water is driven by said reversible motor and said pump for circulating wash water

circulates wash liquid from said wash chamber drain to said rotatable spray arm when said reversible motor rotates in said first direction.

16 (original) The dishwasher of claim 11 further including a sump screen for filtering wash liquid flowing to said pump for circulating wash liquid.

17 (original) The dishwasher of claim 16 wherein said sump screen includes a strainer for collecting large particles filtered from said wash liquid by said sump screen.

18 (original) The dishwasher of claim 1 wherein said wash chamber is a drawer.

19 (original) The dishwasher of claim 1 wherein said dishwasher is an undercounter dishwasher with a front opening wash chamber.

20 (withdrawn) A dishwasher comprising:

a wash chamber having a plurality of walls and a floor;

a pump for circulating wash liquid in said wash chamber;

a rotatable spray arm for receiving wash liquid from said pump and spraying said wash liquid in said wash chamber;

a filter for filtering wash liquid being circulated in said wash chamber mounted in an opening in one of said walls of said wash chamber comprising:

a front wall and a rear wall joined to form a filter chamber;

an inlet opening in said front wall for allowing wash liquid being circulated in said wash chamber to enter said filter chamber;

an outlet opening in said front wall for allowing wash liquid in said filter chamber to return to said wash chamber;

a filter element for said outlet opening for filtering particulate material from said wash liquid as said wash liquid passes through said filter into said wash chamber; and

a drain outlet at the bottom of said filter chamber for draining wash liquid and material filtered by said filter to drain.

21 (withdrawn) The dishwasher of claim 20 wherein said inlet opening is formed by a first portion of said front wall above said inlet opening curving into said filter chamber and a second portion of said front wall below said inlet opening generally in the plane of said front wall.

22 (withdrawn) The dishwasher of claim 20 wherein said outlet opening is formed in said second portion of said front wall.

23 (withdrawn) The dishwasher of claim 20 wherein said opening in said one of said walls of said wash chamber is adjacent the floor of said wash chamber.

24 (withdrawn) The dishwasher of claim 20 wherein said filter comprises a permeable element overlying said outlet opening.

25 (withdrawn) The dishwasher of claim 24 wherein said permeable element is selected from the group of durable woven or non-woven mesh material, porous sheet material, filter media and photo etched sheet material.

26 (withdrawn) The dishwasher of claim 20 wherein said one of said walls is the rear wall of said wash chamber.

27 (currently amended) A dishwasher comprising:

a wash chamber ~~having~~ defined by a plurality of walls, each having an interior surface forming a sidewall of the wash chamber and an exterior surface, and a floor;

a circulation pump for circulating wash liquid in said wash chamber;

at least one fill valve for adding wash liquid to said wash chamber;

a rotatable spray arm for receiving wash liquid from said circulation pump and spraying said wash liquid in said wash chamber;

a control for operating said circulation pump and said fill valve in one or more preprogrammed dishwashing cycles;

a filter ~~provided external to the wash~~ chamber provided on an exterior surface of a wash chamber sidewall for filtering wash liquid being circulated in said wash chamber comprising:

~~a filter chamber defined by~~ a chamber wall and an exterior surface of one of said walls;

an inlet opening in said one of said walls communicating with said filter chamber, wherein said one of said walls has a non-linear portion for allowing wash liquid being circulated in said wash chamber to enter said filter chamber;

an outlet opening in said one of said walls communicating with said filter chamber for allowing wash liquid in said filter chamber to return to said wash chamber;

a filter element provided ~~in a~~ substantially ~~vertical orientation~~in the plane of said one of said walls at said outlet opening for filtering particulate material from said wash liquid as said wash liquid passes through said filter into said wash chamber;

a drain outlet at the bottom of said filter chamber for draining wash liquid and material filtered by said filter to drain; and

at least one sensor for sensing the liquid level in said filter chamber and connected to said control for draining wash liquid and material filtered by said filter in said filter chamber in response to sensing wash liquid rising to a predetermined level in said filter chamber,

wherein the filtering chamber collects particulate material from said wash liquid.

28 (original) The dishwasher of claim 27 further comprising a wash chamber drain located in said floor for collecting wash liquid, and at least one pump for draining wash liquid from said wash chamber drain and for draining wash liquid and material filtered by said filter from said filter chamber.

29 (currently amended) A dishwasher comprising:

a wash chamber having a plurality of walls and a floor;

a circulation pump for circulating wash liquid in said wash chamber;

at least one fill valve for adding wash liquid to said wash chamber;

a rotatable spray arm for receiving wash liquid from said circulation pump and spraying said wash liquid in said wash chamber;

a wash chamber drain located in said floor for collecting wash liquid, and at least one pump for draining wash liquid from said wash chamber drain and for draining wash liquid and material filtered by said filter from said filter chamber;

a control for operating said circulation pump and said fill valve in one or more preprogrammed dishwashing cycles;

a filter provided external to the wash chamber for filtering wash liquid being circulated in said wash chamber comprising:

a filter chamber defined by a chamber and an exterior surface of one of said walls;

an inlet opening in said one of said walls communicating with said filter chamber, wherein said one of said walls has a non-linear portion for allowing wash liquid being circulated in said wash chamber to enter said filter chamber; an outlet opening in said one of said walls communicating with said filter chamber for allowing wash liquid in said filter chamber to return to said wash chamber;

a filter element provided in a substantially vertical orientation at said outlet opening for filtering particulate material from said wash liquid as said wash liquid passes through said filter into said wash chamber;

a drain outlet at the bottom of said filter chamber for draining wash liquid and material filtered by said filter to drain;

at least one sensor for sensing the liquid level in said filter chamber and connected to said control for draining wash liquid and material filtered by said filter in said filter chamber in response to sensing wash liquid rising to a predetermined level in said filter chamber;

wherein the filtering chamber collects particulate material from said wash liquid;~~The dishwasher of claim 28~~ the dishwasher further ~~comprising~~ having:

a selector valve having:

a first inlet connected to said filter drain outlet;

a second inlet connected to said wash chamber drain;

an outlet connected to said pump for draining wash liquid;

one or more valve elements movably mounted in said selector valve for selectively closing said first inlet or said second inlet; and

one or more valve actuators for causing said valve element to selectively close said first inlet or said second inlet, said one or more valve actuators operable by said control in conjunction with said pump for draining wash liquid to drain wash liquid from said filter chamber or from said wash chamber.

30 (original) The dishwasher of claim 28 wherein said at least one pump for draining wash liquid comprises a first drain pump connected to said wash chamber drain and a second drain pump connected to said filter chamber outlet, and said control selectively operates said first drain pump for draining said wash chamber and selectively operates said second drain pump for draining said filter chamber.

31 (original) The dishwasher of claim 27 wherein said at least one sensor comprises a plurality of optical sensors positioned for sensing a plurality of wash liquid levels in said filter chamber.

32 (previously presented) The dishwasher of claim 27 wherein said at least one sensor comprises one or more optical or turbidity sensors positioned for sensing a plurality of wash liquid levels in said filter chamber and for sensing the murkiness of wash liquid in said filter chamber and said control is arranged to initiate a purge cycle to drain wash liquid from said dishwasher and replace wash liquid drained from said dishwasher in response to said one or more optical or turbidity sensors detecting a predetermined murky condition.

33 (original) The dishwasher of claim 27 wherein one of said at least one sensor is a pressure sensor for sensing the wash liquid level in said filter chamber.

34 (original) The dishwasher of claim 33 wherein said rotatable spray arm has one or more nozzles arranged to spray wash liquid on said filter element to backwash said filter element, and at least one pressure sensor is located adjacent said filter element for sensing momentary increases in pressure when said rotatable spray arm passes said filter

element and said one or more nozzles spray wash liquid on said filter element, and said control is arranged to detect the absence of momentary pressure increases when said circulation pump is circulating wash liquid and thereby infer a stuck spray arm condition and activate a signal to advise the operator of said dishwasher to check the spray arm.

35 (original) The dishwasher of claim 27 wherein said filter element is a permeable element selected from the group of durable woven or non-woven mesh material, porous sheet material, filter media and photo etched sheet material.

36 (original) The dishwasher of claim 27 wherein said control operates a fill valve to add wash liquid to said wash chamber to replace wash liquid drained from said filter chamber.

37 (original) The dishwasher of claim 27 wherein said filter includes a liquid spray member positioned adjacent said filter, and said liquid spray member is connected to a fill valve for spraying wash liquid on said filter when wash liquid is added to said wash chamber for flushing filtered material off said filter.

38 (original) The dishwasher of claim 37 wherein said liquid spray member is a spray nozzle positioned in said filter chamber.

39 (original) The dishwasher of claim 37 wherein said liquid spray member is a spray nozzle positioned in said wash chamber.